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Dear Professor Hederberg,

Thank you for your interesting letter. I enclose reprints of two cytological papers, and will send you others as they become available.

I have not seen anything exactly as you describe it, but have observed a scheme of chromosome rearrangement of which I enclose a diagram:— 3, 4, 5 are a normal division (I am now of the opinion that bacterial chromosomes are always paired). 6 is a tri-nucleate cell which may arise by a reductive division.

7 is a fusion nucleus. 8 is the same after a single chromosome doubling. 9, 10 are reaggregation and chromosome doubling again, followed by 11, fragmentation and return to the bacillary state. This certainly occurs in Rough and smooth types of *Escherichia*, in *Streptomyces* and in *Myxobacteria*. It has nothing to do with sponging.

One paper on this phenomenon shall be appearing in the next number of the J. Gen. Microbiol., and one in the J. Hyg. Camb. the latter rather later and fuller.

This scheme leaves room, of course, for a lot of details, conjugation, reduction etc. which I cannot claim more definitely so far.

Yours sincerely,  
K. A. Bisset

